



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,827	06/30/2000	Peter Schwarz	548.0011USU	2208

7590 10/19/2006
Charles N. J. Ruggiero
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
One Landmark Square
Stamford, CT 06901-2682

EXAMINER

STOCK JR, GORDON J

ART UNIT PAPER NUMBER

2877

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,827

Applicant(s)

SCHWARZ ET AL.

Examiner

Gordon J. Stock

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-42, 44-58 and 60-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-42, 44-58 and 60-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment received on July 24, 2006 has been entered into the record.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 56-58, 60-64, 67, 68, and 70** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In **claim 56** the particular determining step is an abstraction without a tangible result. Merely ‘determining’ would not appear to be sufficient to constitute a tangible result, since the outcome of the determining has not been used in a disclosed practical application nor made available in such a manner that its usefulness in a disclosed practical application can be realized. See OG Notices: 22 November 2005, "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility".

Specifically: Part b. *Practical Application the Produces a Useful, Concrete, and Tangible Result* under Section IV *Determine Whether the Claimed Invention Complies with the Subject Matter Eligibility Requirement of 35 U.S.C. Sec. 101*, sentence 3, in the OG Notice from 22 November 2005 states ‘In determining whether the claim is for a “practical application,” the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather that the final result achieved by the claimed invention is “useful, tangible, and concrete.”’

Claims 57-58, 60-64, 67, 68, and 70 are also rejected for being dependent upon a rejected base claim. In addition, the further limiting of the parent **claim 56** with the particular

Art Unit: 2877

limitations of **claims 57-58, 60-64, 68, and 70** does not constitute a tangible result to overcome the rejection under 35 U.S.C. 101 above.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 39-70** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, **claims 39 and 56** both have ‘an aggregate of nightlight spectrum and eye sensitivity’ which was not reasonably described in the specification. The specification discloses using light standards with daylight type spectra and eye sensitivity aggregated together and there is no mention of a light type standard with a night light spectrum. The aggregates described use a light standard with a daylight type spectra and two types of eye sensitivity, light-acclimated and darkness acclimated (page 20, lines 20-26; page 21, lines 1-3; page 22, lines 10-20). **Claims 40-55, 57-70** are rejected for depending from a rejected base claim.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. **Claims 39-42, 44, 45, 49, 50, 52, 54, 56, 58, 60, 64, 66, and 68** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)**—previously cited.

Art Unit: 2877

As for **claims 39, 44, 49, and 56**, Steenhoek in a portable colorimeter discloses the following: a halogen source at a first predetermined angle to the surface, said emitted light having a light intensity over the entire visible spectral range (**claims 39 and 56**)(Figs. 1 and 9); a photosensor aligned at a second predetermined angle to the surface and generating a signal based on reflected light (**claims 39 and 56**) (Fig. 1; 18); filters arranged between light diode and photosensors, blue and red filters (**claims 39 and 56**) (col. 6, lines 55-65 with Fig. 2: 11a-11c, 23a, 23b, and 21 in relation to Fig. 3: 12a, 12b, 12c, and 39) and the system comprises daylight spectra (**claims 39 and 56**) (col. 8, lines 1-15) and the system utilizes a sensitivity of the human eye (**claims 39 and 56**) (col. 7, lines 65-69). In addition, Steenhoek suggests that colorimetric systems with filters wish to have an aggregate spectra of light diode and photosensor and filter correspond to daylight spectrum and eye sensitivity if the illuminant has a daylight spectrum (**claims 39 and 56**) (col. 4, lines 58-69). Steenhoek discloses a controller to derive a characteristic (**claims 39 and 56**) (Fig. 2); a lens that parallelizes said emitted light (Fig. 1: 12a-12c; col. 5, lines 65-67); a lens that focuses said reflected light via a refocusing grating onto said photosensor (Fig. 1: 13; col. 6, lines 9-25); three light sources, three halogen lamps, are used (**claims 44, 49**)(Fig. 1)

As for a diode having intensity over the entire visible range and a second diode, Steenhoek is silent. However, a diode having intensity over the entire visible range is a white light source. And halogen sources are also white light sources. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to substitute the three halogen sources with three white diodes, for they are both functionally equivalent as white light sources.

In **claim 39**, as for ‘for adjusting said emitted light to an aggregate of daylight spectrum and eye sensitivity or nightlight spectrum and eye sensitivity (lines 8-10);’ ‘for adjusting said reflected light to an aggregate of daylight spectrum and eye sensitivity (lines 11-13);’ ‘for parallelizing said emitted light that impinges on said surface (line 14);’ ‘for focusing said reflected light on said photosensor (line 15)’ it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). However, again, Steenhoek does disclose a lens that parallelizes said emitted light (Fig. 1: 12a-12c; col. 5, lines 65-67); a lens that focuses said reflected light via a refocusing grating onto said photosensor (Fig. 1: 13; col. 6, lines 9-25).

As for **claims 40-42, 45, 50, 52, 54, 58, 60, 64**, Steenhoek discloses everything as above (see **claims 39 and 56**). In addition, as for gloss being determined, the Steenhoek’s system is angled at the specular angle of 45 degrees (**claims 40, 42, 58**) (col. 5, lines 35-50). Also three characteristics are found (**claim 41**)(col. 9, lines 10-16) which are perceptual color values (**claims 42, 58**)(col. 4, lines 45-50), and a plurality of photosensors that are at least three elements are adjacent to each other (**claims 45, 54, 60**)(Fig. 1, 18; Fig. 2, 18). The angles used are the following: 0, -30, and 65 degrees (**claim 50**)(col. 5, lines 35-50). In addition, color temperature is controlled and corrected and a temperature monitor is used (**claim 52**)(col. 6, lines 65-67; col. 7, lines 1-5 and lines 40-49). As for relative movement, to change between twelve standard ceramic tiles (**claim 64**) (col. 9, lines 23-35), movement must be performed.

As for **claim 52**’s ‘for determining a temperature of each of said light diode and said photosensor so ... can be made’ it has been held that a recitation with respect to the manner in

Art Unit: 2877

which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987).

As for **claims 66 and 68**, Steenhoek discloses everything as above (see **claims 39 and 56**). Steenhoek does not explicitly state that the angles of the light sources do not vary over time. However, he suggests it, for he states that the predetermined angles, -30 degrees, 0 degrees, and 65 degrees, of the light sources are optimal angles to give maximum color information with minimal measurement effort (col. 6, lines 45-50; col. 5, lines 28-45). It would be obvious to one of ordinary skill in the art at the time the invention was made to have the predetermined angles not vary in time in order to guarantee accurate color measurements with maximum color information.

8. **Claims 46-48 and 61-63** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)—previously cited** in view of **Ohkubo (5,619,427)—previously cited**.

As for **claims 46-48 and 61-63**, Steenhoek discloses everything as above (see **claims 39 and 56** above). In addition, Steenhoek discloses receiving perceptual values from color coordinates (col. 4, lines 1-45). He is silent concerning a light pattern. Ohkubo in a color conversion method teaches using a light/dark edge grid pattern in order to get color coordinates (Fig. 4; col. 6, lines 35-50). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have a grid like pattern in order to determine stimulus signal from optical signals.

9. **Claim 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)—previously cited** in view of **Klenk et al. (4,918,321)—previously cited**.

Art Unit: 2877

As to **claim 51**, Steenhoek discloses everything as above (see **claim 39** above).

However, Steenhoek is silent concerning emitting a strip of light perpendicular to the direction of propagation. Klenk in a reflected light scanning method teaches using strips of light to illuminate surface in order to better profile matt surfaces (col. 1, lines 1-15 and lines 53-68). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to emit strips of light in order to better profile matt surfaces.

10. **Claim 53** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)—previously cited** in view of **Lex (5,596,412)—previously cited**.

As to **claim 53**, Steenhoek discloses everything as above (see **claim 39**). However, Steenhoek does not teach a measurement wheel positioned on surface. Lex in a device for physiological assessment of reflective surfaces teaches using a measurement wheel coupled to a rotating angle output device in order to determine the exact geometric relationship of the measuring points on the surface (col. 2, lines 55-64; col. 6, lines 55-67; col. 7, lines 1-30). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the system comprise a measurement wheel coupled to a rotating angle output device in order to determine the exact geometric relationship of the measuring points on the surface being studied.

As for 'to maintain a constant ... relative to the surface,' it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

11. **Claims 55 and 57** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)—previously cited** in view of the applicant's disclosure of prior art.

As for **claims 55 and 57**, Steenhoek discloses everything as above (see **claim 39 and 56**). As for the measuring cycle, Steenhoek is silent concerning the measurement cycle being less than .2 seconds. However, the applicant's disclosure teaches prior art of a measurement cycle taking less than .2 seconds (page 5, line 27). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the measurement cycle be less than .2 seconds, for measurement cycles with light emitting diodes are typically less than .2 seconds in order to shorten the time it takes to measure samples.

12. **Claims 65 and 67** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)-previously cited** in view of **Chen et al. (6,163,038)—previously cited**.

As for **claims 65 and 67**, Steenhoek discloses everything as above (see **claims 39 and 56**). In addition, Steenhoek discloses the light emitting members, filaments, of the halogen sources are at a precisely defined position within the light source that defines the light path to the sample surface (three lines bisecting lamps through filaments and defining 65 degrees and -30 degrees in Fig. 1). Steenhoek does not explicitly state that the defined position does not vary over time. However, he suggests it, for he states that the predetermined angles, -30 degrees, 0 degrees, and 65 degrees, of the light sources are optimal angles to give maximum color information with minimal measurement effort (col. 6, lines 45-50; col. 5, lines 28-45). It would be obvious to one of ordinary skill in the art at the time the invention was made to have the light emitting member's defined position not vary in time in order to guarantee accurate color measurements with maximum color information. However, as for a light diode comprising a

Art Unit: 2877

light emitting member with a precisely defined position that does not vary over time, he is silent. However, Chen in a white led teaches that light emitting members are at a precise position to ensure white light emission through proper overlap of emitting layers (Fig. 8, 64-65; col. 5, lines 30-55). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to have the white led have a light emitting member at a precise location within the light diode that does not vary in time in order to have consistent overlap of wavelengths for constant white light emission.

13. **Claims 69 and 70** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steenhoek (4,917,495)**—previously cited in view of **Weber et al. (5,268,749)**—previously cited.

As for **claims 69 and 70**, Steenhoek discloses everything as above (see **claims 69 and 70**). However, Steenhoek is silent concerning a scatter disk arrangement. Weber in an apparatus for providing uniform illumination teaches using a scatter disk, a diffuser in front of annular stop, to illuminate a sample plane uniformly (col. 10, lines 35-50). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to use a diffuser in order to uniformly illuminate the sample.

As for ‘so that said emitted light homogeneously illuminates the surface,’ it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

Response to Arguments

14. Though applicant's arguments have been rendered moot by the new grounds of rejection, the arguments filed on July 24, 2006 have been fully considered but they are not persuasive. Specifically, on page 8 that Steenhoek does not disclose or suggest the use of a light diode, Examiner disagrees. Steenhoek suggests the use of a light diode by having a white light source. A diode having intensity over the entire visible range is a white light source. And halogen sources are also white light sources. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to substitute the three halogen sources with three white diodes, for they are both functionally equivalent as white light sources.

Specifically, on page 8 of Remarks that the filters are not positioned between a light diode and the surface as claimed, Examiner disagrees. **Claim 39** reads 'or a filter arranged between said light diode and said photosensor for adjusting said reflected light to an aggregate of daylight spectrum and eye sensitivity.' Steenhoek discloses filters between said light diode and said photosensor that filter emitted light not reflected light (col. 6, lines 55-65 with Fig. 2: 11a-11c, 23a, 23b, and 21 in relation to Fig. 3: 12a, 12b, 12c, and 39); however, as 'for adjusting said reflected light to an aggregate of daylight spectrum and eye sensitivity' it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex Parte Masham*, 2 USPQ F.2d 1647 (1987).

Specifically, on page 8 the argument that Steenhoek does not disclose or suggest a filter that adjusts the emitted light to an aggregate of nightlight spectrum, Examiner agrees. However, **claim 39** states 'or nightlight spectrum and eye sensitivity (line 9)' which does not preclude a

Art Unit: 2877

filter with daylight spectrum. In addition, 'or nightlight spectrum and eye sensitivity (line 9)' falls within the phrase 'for adjusting said emitted light ...eye sensitivity' and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). In addition, for **claim 56** 'or to an aggregate of nightlight spectrum and eye sensitivity (lines 11-12)' does not preclude filtering to have an aggregate of daylight spectrum and eye sensitivity.

On page 9 that Steenhoek does not disclose a lens for focussing and parallelizing, Examiner disagrees. Steenhoek discloses a lens that parallelizes said emitted light (Fig. 1: 12a-12c; col. 5, lines 65-67); a lens that focuses said reflected light via a refocusing grating onto said photosensor (Fig. 1: 13; col. 6, lines 9-25). In addition, 'for parallelizing said emitted light that impinges on said surface (line 14);' 'for focusing said reflected light on said photosensor (line 15)' it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). Also 'focusing said reflected light on said photosensor' of **claim 39** does not preclude having a focusing grating between the lens and photosensor. In addition, for **claim 56** 'focusing said reflected light on said photosensor' does not preclude focusing with a grating.

On page 10, that Steenhoek with a diode would render the adjusting color-temperature arrangement as obsolete, Examiner disagrees. The color-temperature adjustment arrangement is for keeping a light source's spectra constant. It would be obvious to one of ordinary skill in the

Art Unit: 2877

art to have the light diode have a adjustment system in order to deal with any fluctuations in the source's spectra during operation to ensure measurement repeatability and therefore precision.

On page 10, in regards to replacing lenses for parallezing and focusing, see Examiner response above in regards to the argument on page 9 concerning the lenses and focusing/parallelizing steps as claimed in **claims 39 and 56**.

As for the rest of the arguments on pages 10-11 in regards to the secondary references, they have been rendered moot by the new grounds of rejection as well as by Examiner's response to the previous arguments on pages 8-10.

As for the new rejection under 35 U.S.C. 101 the Examiner would like to apologize for any inconvenience, but upon further consideration, the rejection of **claims 56-58, 60-64, 67, 68, and 70** under 35 U.S.C. 101 was made.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (571) 273-8300

Art Unit: 2877

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

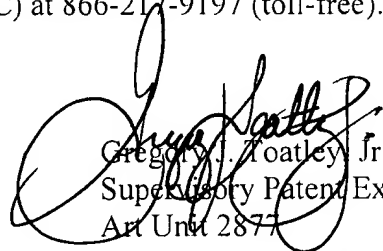
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr., can be reached at 571-272-2800 ext 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



gs

October 12, 2006



Gregory J. Toatley, Jr.
Supervisory Patent Examiner
Art Unit 2877